

# COMPLICATIONS OF LAPAROSCOPY

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## SUMMARY

In a series of 518 diagnostic laparoscopies complications were encountered in 25 cases (48/1000) of which 23 were minor complications and only 2 were major ones requiring operative management. There was no mortality from the procedure.

### Introduction

Laparoscopy is now an essential technique in gynaecology and is becoming popular day by day. Complications are usually avoided if adequate precautionary measures are taken during operation. But as it is an invasive operative procedure minor and major problems are sometimes encountered in clinical practice. This study was undertaken to see how much it is risk effective.

### Patients and Methods

Diagnostic laparoscopies were done as per indications e.g. infertility, menstrual disorders, obscure pelvic mass etc. Therapeutic laparoscopies were omitted from the series to avoid complications arising out of laparoscopic surgical procedures. Single puncture laparoscopy under general anaesthesia was done in most of the cases. Double puncture technique was performed in few cases. A laparotomy set

was always kept ready before each laparoscopy to tackle emergency situation if any was encountered.

Usually the patients had a short admission in the morning of the day of operation and were discharged in the afternoon hours after laparoscopy. Where complication was suspected discharge was delayed and the patient was kept under observation. In the next follow up visit patients were thoroughly checked and specially asked for any new symptom arising out of laparoscopy.

### Results and Analysis

A total of 518 diagnostic laparoscopies were performed during the period from 1984 to 1988. Complications were encountered in 25 (48/1000) cases (Table I) of which only 2 were major problems and others were minor ones. There was one laparoscopy failure - pelvic structures not at all visualized because of dense adhesions.

*Minor complications:* Mild to moderate fever was the commonest complica-

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tion, encountered in 13 (52%) cases. Febrile morbidity was due to wound infection in 4 cases, intraperitoneal infection in 1 case, respiratory tract infection from intubation in 2 cases, urinary tract infection in two cases and the cause remained unresolved in 4 cases. Peritonitis patient was discharged as usual after laparoscopy but readmitted on second day with remittent type of temperature, pain in abdomen, tenderness in lower abdomen, mild distension and sluggish peristaltic sounds. There was no fluid collection in the abdomen. She was treated conservatively.

TABLE - I  
COMPLICATIONS OF LAPAROSCOPY

Complications	No.	Rate / 1000
Wound infection	4	7.7
Peritonitis	1	1.9
UTI	2	3.8
Trachitis	2	3.8
Unexplained fever	4	7.7
Pain in abdomen	7	13.4
Parietal emphysema	1	1.9
Uterine perforation	1	1.9
Wound haematoma	2	3.8
IP Haemorrhage	1	1.9

Cases with pain in abdomen were discharged - after 24 hours in 4 cases and after 48 hours in 3 cases. Sometimes pain was referred to back or shoulder or both. Parietal emphysema was encountered in 1 obese infertile patient during pneumoperitoneum. Immediately the procedure was stopped, incision slightly extended and the gas expressed by mechanical pressure. In 1 case anterior wall of the small uterus near fundus was perforated by the elevator. It was removed and there was no remarkable bleeding from the site of perforation.

Major Complications: Intraperitoneal haemorrhage occurred in 1 patient. It was due to laceration and puncture of adherent omentum caused by the trocar. Wound haematoma was found in 2 patients of which 1 was a real problem - the haematoma gradually increasing and spreading within the parietal musculoaponeurotic layers. It was managed surgically; the clots evacuated and the bleeding point secured.

### Discussion

Complication rate was 48/1000 of which 92% were minor complications. Phillips (1977) in a large series encountered overall complications of 29/1000, all of which were minor ones. Mehta (1981) recorded the same in 40/1000 cases, 99% of which were minor complications.

Infections were treated with chemotherapy. UTI and unexplained fever cases were probably ascending urogenital infections arising out of catheterization and application of uterine elevator. Viewing telescope and the other instruments were routinely sterilized in 2% cidex solution. Still intraperitoneal infection could not be prevented in 1 case. In RCOG survey (1978) different infection rates reported were - abdominal wound infection 0.5/1000, intraabdominal infection 0.5/1000, UTI 0.5/1000 and respiratory tract infection 0.2/1000.

Pain in abdomen was mostly due to use of air/oxygen for pneumoperitoneum. As the gas absorbed slowly from the peritoneal cavity, pain also gradually passed off. Levinson (1987) advised use of small volume of gas to minimise the pain. Alexander and Hull (1987) recommended use of a gas drain to reduce the pain.

Uterine perforation occurred because



the uterus was hypoplastic and the cavity was smaller than normal to fit with the intrauterine part of the elevator. It can be avoided by use of suction cup uterine elevator of Cochen-Elder type than Hulka type.

Subcutaneous emphysema was encountered in 1 obese patient. Probably abdominal wall below umbilicus was not properly picked up during introduction of Verres needle and it passed in a shallow angle to remain in the layers of abdominal wall. Steptoe (1977) advised that in cases of obese patients direction of Verres needle should be more vertical than horizontal or better to do the pneumoperitoneum through posterior fornix of vagina. Long Verres needle may also be used for obese patients.

Major complication rate was 3.8/1000 (3.4/1000 by RCOG survey 1978). There was one laparoscopy failure case and no mortality from the procedure. RCOG survey encountered the mortality rate of 8/100000. More cases need to be studied before commenting on mortality. However, proper case selection, preoperative check up and cardiac monitoring during operation specially during pneumoperitoneum definitely reduce the chance of catastrophe.

### Conclusion

Laparoscopy is an operative procedure and as such has a potential for complications. Strict asepsis should be maintained and steps of operation should be followed meticulously. Still complications are not always avoidable. Facilities for exploratory laparotomy should be available to tackle serious intraoperative complications which may be encountered in rare occasions. However, the advantages and benefits of laparoscopy far outweigh its minor and rare drawbacks.

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